

	Hits	Search Text	DBs	Time Stamp
1	13072	707/1-5,8-10.ccls.	US-PGPUB; USPAT	2004/09/23 09:58
2	8798	707/100-104.1.ccls.	US-PGPUB; USPAT	2004/09/23 09:59
3	3731	707/200-203.ccls.	US-PGPUB; USPAT	2004/09/23 09:59
4	167	345/961,965.ccls.	US-PGPUB; USPAT	2004/09/23 10:00
5	21440	709/200-203,217-229.ccls.	US-PGPUB; USPAT	2004/09/23 10:01
6	2926	712/1-28.ccls.	US-PGPUB; USPAT	2004/09/23 10:01
7	1412	713/1.ccls.	US-PGPUB; USPAT	2004/09/23 10:02
8	2480	714/1-4,15,18.ccls.	US-PGPUB; USPAT	2004/09/23 10:02
9	2838	718/100-104.ccls.	US-PGPUB; USPAT	2004/09/23 10:03
10	373	719/313.ccls.	US-PGPUB; USPAT	2004/09/23 10:03
11	20634	707/1-5,8-10.ccls. or 707/100-104.1.ccls. or 707/200-203.ccls.	US-PGPUB; USPAT	2004/09/27 14:06
12	30326	345/961,965.ccls. or 709/200-203,217-229.ccls. or 712/1-28.ccls. or 713/1.ccls. or 714/1-4,15,18.ccls. or 718/100-104.ccls. or 719/313.ccls.	US-PGPUB; USPAT	2004/09/27 14:07
13	235	(logical with network with address\$2) and (external with access\$4)	US-PGPUB; USPAT	2004/09/27 14:09
14	1919	(prefer\$4 with node\$2)	US-PGPUB; USPAT	2004/09/27 14:14
15	112	off with critical adj path	US-PGPUB; USPAT	2004/09/27 14:19
16	38	(cluster\$2 with framework and node\$2) and ((provid\$4 with service\$2) and (cluster with service\$2))	US-PGPUB; USPAT	2004/09/27 14:20
17	6	(cluster\$2 with framework and node\$2) and ((provid\$4 with service\$2) and (cluster with service\$2)) and ((prefer\$4 with node\$2) and execut\$4 and (unavailable or "not available"))	US-PGPUB; USPAT	2004/09/27 14:20

	Hits	Search Text	DBs	Time Stamp
18	153	(prefer\$4 with node\$2) and execut\$4 and (unavailable or "not available")	US-PGPUB; USPAT	2004/09/27 14:27
19	26	(prefer\$4 adj2 node\$2) and execut\$4 and (unavailable or "not available")	US-PGPUB; USPAT	2004/09/27 14:33
20	26	(prefer\$4 adj2 node\$2) and execut\$4 and (unavailable or "not available") and ((prefer\$4 with node\$2) and execut\$4 and (unavailable or "not available"))	US-PGPUB; USPAT	2004/09/27 14:34
21	2	(cooperative with resource\$2 and group\$2) and ((logical with network with address\$2) and (external with access\$4) and monitor\$2 and application\$2)	US-PGPUB; USPAT	2004/09/27 14:37
22	184	cooperative with resource\$2 and group\$2	US-PGPUB; USPAT	2004/09/27 14:41
23	35	cooperative and resource\$2 with group\$2 and ((logical with network with address\$2) and (external with access\$4) and monitor\$2 and application\$2)	US-PGPUB; USPAT	2004/09/27 14:49
24	38	cooperative and resource\$2 with (group\$2 or set\$2) and ((logical with network with address\$2) and (external with access\$4) and monitor\$2 and application\$2)	US-PGPUB; USPAT	2004/09/27 14:50
25	90	cluster\$2 with framework and node\$2	US-PGPUB; USPAT	2004/09/27 15:09
26	9017	(cluster\$2 or group\$2) with (framework or structure) and node\$2	US-PGPUB; USPAT	2004/09/27 15:10
27	959	(cluster\$2 or group\$2) adj2 (framework or structure) and node\$2	US-PGPUB; USPAT	2004/09/27 15:11
28	532	cooperative and resource\$2 with group\$2	US-PGPUB; USPAT	2004/09/27 15:18
29	8	(cluster\$2 or group\$2) adj2 (framework or structure) and node\$2 and (cooperative and resource\$2 with group\$2)	US-PGPUB; USPAT	2004/09/27 15:19
30	25	(cluster\$2 or group\$2) adj2 (framework or structure) and node\$2 and (cooperat\$4 and resource\$2 with group\$2)	US-PGPUB; USPAT	2004/09/27 15:19

	Hits	Search Text	DBs	Time Stamp
31	1561	cooperat\$4 and resource\$2 with group\$2	US-PGPUB; USPAT	2004/09/27 15:44
32	391	cooperat\$4 and resource\$2 adj2 group\$2	US-PGPUB; USPAT	2004/09/27 15:45
33	5	cooperat\$4 and resource\$2 adj2 group\$2 and ((cluster\$2 or group\$2) adj2 (framework or structure) and node\$2 and (cooperat\$4 and resource\$2 with group\$2))	US-PGPUB; USPAT	2004/09/27 15:45
34	159	(logical with network with address\$2) and (external with access\$4) and monitor\$2 and application\$2	US-PGPUB; USPAT	2004/09/27 15:52
35	321	(network and logical adj2 address\$2) and (external with access\$4) and monitor\$2 and application\$2	US-PGPUB; USPAT	2004/09/27 15:53
36	174	(network and logical adj2 address\$2) and (external near2 access\$4) and monitor\$2 and application\$2	US-PGPUB; USPAT	2004/09/27 15:53
37	862	(provid\$4 with service\$2) and (cluster with service\$2)	US-PGPUB; USPAT	2004/09/27 15:54
38	10378	(provid\$4 with service\$2) and ((cluster or group) with service\$2)	US-PGPUB; USPAT	2004/09/27 15:54
39	1144	(provid\$4 adj2 service\$2) and ((cluster or group) adj2 service\$2)	US-PGPUB; USPAT	2004/09/27 15:55
40	4	(provid\$4 adj2 service\$2) and ((cluster or group) adj2 service\$2) and ((network and logical adj2 address\$2) and (external near2 access\$4) and monitor\$2 and application\$2)	US-PGPUB; USPAT	2004/09/27 15:55
41	19	(restart\$4 with service\$2) and (surviv\$4 with node\$2)	US-PGPUB; USPAT	2004/09/27 16:14
42	20634	707/1-5,8-10.ccls. or 707/100-104.1.ccls. or 707/200-203.ccls.	US-PGPUB; USPAT	2004/09/30 08:51
43	30326	345/961,965.ccls. or 709/200-203,217-229.ccls. or 712/1-28.ccls. or 713/1.ccls. or 714/1-4,15,18.ccls. or 718/100-104.ccls. or 719/313.ccls.	US-PGPUB; USPAT	2004/09/30 08:51

	Hits	Search Text	DBs	Time Stamp
44	795	((cluster\$2 or group\$2) with node\$2) and (critical eith path\$2) and (external with access)	US-PGPUB; USPAT	2004/09/30 09:53
45	23	((cluster\$2 or group\$2) with node\$2) and (critical with path\$2) and (external with access)	US-PGPUB; USPAT	2004/09/30 09:53
46	20758	707/1-5,8-10.ccls. or 707/100-104.1.ccls. or 707/200-203.ccls.	US-PGPUB; USPAT	2004/10/01 10:53
47	30474	345/961,965.ccls. or 709/200-203,217-229.ccls. or 712/1-28.ccls. or 713/1.ccls. or 714/1-4,15,18.ccls. or 718/100-104.ccls. or 719/313.ccls.	US-PGPUB; USPAT	2004/10/01 10:53
48	20758	707/1-5,8-10.ccls. or 707/100-104.1.ccls. or 707/200-203.ccls.	US-PGPUB; USPAT	2004/10/02 13:22
49	30474	345/961,965.ccls. or 709/200-203,217-229.ccls. or 712/1-28.ccls. or 713/1.ccls. or 714/1-4,15,18.ccls. or 718/100-104.ccls. or 719/313.ccls.	US-PGPUB; USPAT	2004/10/02 13:22
50	20758	707/1-5,8-10.ccls. or 707/100-104.1.ccls. or 707/200-203.ccls.	US-PGPUB; USPAT	2004/10/04 08:32
51	30474	345/961,965.ccls. or 709/200-203,217-229.ccls. or 712/1-28.ccls. or 713/1.ccls. or 714/1-4,15,18.ccls. or 718/100-104.ccls. or 719/313.ccls.	US-PGPUB; USPAT	2004/10/04 08:32
52	20758	707/1-5,8-10.ccls. or 707/100-104.1.ccls. or 707/200-203.ccls.	US-PGPUB; USPAT	2005/05/12 16:09
53	30474	345/961,965.ccls. or 709/200-203,217-229.ccls. or 712/1-28.ccls. or 713/1.ccls. or 714/1-4,15,18.ccls. or 718/100-104.ccls. or 719/313.ccls.	US-PGPUB; USPAT	2005/05/12 16:09
54	24478	707/1-5,8-10.ccls. or 707/100-104.1.ccls. or 707/200-203.ccls.	US-PGPUB; USPAT	2005/05/13 08:32

	Hits	Search Text	DBs	Time Stamp
55	34759	345/961,965.ccls. or 709/200,201-203,217-229.ccls. or 712/1-28.ccls. or 713/1.ccls. or 714/1- 4,15,18.ccls. or 718/100- 104.ccls. or 719/313.ccls.	US-PGPUB; USPAT	2005/05/13 08:33
56	1	"5623666".pn.	US-PGPUB; USPAT	2005/05/13 08:35
57	1	"5727206".pn.	US-PGPUB; USPAT	2005/05/13 08:37
58	1	"5828876".pn.	US-PGPUB; USPAT	2005/05/13 08:38
59	1	"5872981".pn.	US-PGPUB; USPAT	2005/05/13 08:39
60	1	"5890153".pn.	US-PGPUB; USPAT	2005/05/13 08:41
61	1	"6108654".pn.	US-PGPUB; USPAT	2005/05/13 08:42
62	1	"6625602".pn.	US-PGPUB; USPAT	2005/05/13 08:43
63	1	"6772255".pn.	US-PGPUB; USPAT	2005/05/13 08:43
64	3	((prefer\$4 with node\$2) and execut\$4 and (unavailable or "not available")) and ((restart\$4 with service\$2) and (surviv\$4 with node\$2))	US-PGPUB; USPAT	2005/05/13 10:22
65	1370	(respon\$6 adj2 request\$2) and (respon\$6 adj2 message\$2) and indicat\$4 and (error\$2 with condition\$2)	US-PGPUB; USPAT	2005/05/13 10:24
66	330	(S57 or S58) and ((respon\$6 adj2 request\$2) and (respon\$6 adj2 message\$2) and indicat\$4 and (error\$2 with condition\$2))	US-PGPUB; USPAT	2005/05/13 10:24
67	220	(S57 or S58) and ((respon\$6 adj2 request\$2) and (respon\$6 adj2 message\$2) and indicat\$4 and (error\$2 with condition\$2) and (request\$4 with service\$2))	US-PGPUB; USPAT	2005/05/13 10:25
68	1	"5706516".pn.	US-PGPUB; USPAT	2005/05/13 13:35
69	1	"5802523".pn.	US-PGPUB; USPAT	2005/05/13 13:36
70	1	"6799173".pn.	US-PGPUB; USPAT	2005/05/13 13:36

	Hits	Search Text	DBs	Time Stamp
71	24478	707/1-5,8-10.ccls. or 707/100-104.1.ccls. or 707/200-203.ccls.	US-PGPUB; USPAT	2005/05/13 13:42
72	24478	707/1-5,8-10.ccls. or 707/100-104.1.ccls. or 707/200-203.ccls.	US-PGPUB; USPAT	2005/05/13 13:42
73	34759	345/961,965.ccls. or 709/200,201-203,217-229.ccls. or 712/1-28.ccls. or 713/1.ccls. or 714/1- 4,15,18.ccls. or 718/100- 104.ccls. or 719/313.ccls.	US-PGPUB; USPAT	2005/05/13 13:43
74	34759	345/961,965.ccls. or 709/200,201-203,217-229.ccls. or 712/1-28.ccls. or 713/1.ccls. or 714/1- 4,15,18.ccls. or 718/100- 104.ccls. or 719/313.ccls.	US-PGPUB; USPAT	2005/05/13 13:43
75	43	(S57 or S58) and ((respon\$6 adj2 request\$2) and (respon\$6 adj2 message\$2) and indicat\$4 and (error\$2 with condition\$2) and (request\$4 with service\$2) and node\$2 and cluster\$2)	US-PGPUB; USPAT	2005/05/13 13:44
76	24478	707/1-5,8-10.ccls. or 707/100-104.1.ccls. or 707/200-203.ccls.	US-PGPUB; USPAT	2005/05/13 13:44
77	34759	345/961,965.ccls. or 709/200,201-203,217-229.ccls. or 712/1-28.ccls. or 713/1.ccls. or 714/1- 4,15,18.ccls. or 718/100- 104.ccls. or 719/313.ccls.	US-PGPUB; USPAT	2005/05/13 13:44
78	7	(S76 or S77) and ((respon\$6 adj2 request\$2) and (respon\$6 adj2 message\$2) and indicat\$4 and (error\$2 with condition\$2) and (request\$4 with service\$2) and (standby with node\$2) and cluster\$2)	US-PGPUB; USPAT	2005/05/13 13:45

File 347:JAPIO Nov 1976-2004/Feb(Updated 040607)

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File 350:Derwent WPIX 1963-2004/UD,UM &UP=200437

(c) 2004 Thomson Derwent

Set	Items	Description
S1	19222	CLUSTER???
S2	91	(RESOURCE OR FAILOVER)()GROUP? ?
S3	5	PREFERRED()NODE? ?
S4	3915	(BACKUP OR BACK()UP OR FAILOVER OR STANDBY OR STAND()BY OR REDUNDANT OR SECONDARY)(2W)(NODE? ? OR TERMINAL? ? OR COMPUTE- R? ? OR PC? ? OR SERVER? ?)
S5	120072	(LOGICAL OR VIRTUAL OR NETWORK OR IP OR INTERNET()PROTOCOL? ?) (2W)ADDRESS OR SOCKET? ?
S6	62	S1 AND S2:S4
S7	4	S6 AND S5
S8	62	S6:S7
S9	41	S8 AND AC=US/PR
S10	33	S9 AND AY=(1970:2001)/PR
S11	29	S8 NOT S10
S12	9	S11 NOT PD>20010228
S13	2	AN=US 98190664

10/5/3 (Item 3 from File: 350)
DIALOG(R)File 350:Derwent WPIX
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10/04/249 **Image available**
WPI Acc No: 2003-810450/200376
XRPX Acc No: N03-648915

Failure recovery system for computer network, has cluster server to run
cluster software to create recovery group that receives request
directed from user to failed server so that cluster server is operated
to serve user

Patent Assignee: DELL PROD LP (DELL-N)
Inventor: KOSACEK M; NGUYEN N
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6609213	B1	20030819	US 2000637093	A	20000810	200376 B

Priority Applications (No Type Date): US 2000637093 A 20000810

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 6609213	B1	9	G06F-011/30	

Abstract (Basic): US 6609213 B1

NOVELTY - A **cluster** server is operated to receive ownership of
logical unit number (LUN) address of a failed server after failure
detection. The **cluster** server operates **cluster** software to create a
recovery group associated with **network address** of failed server so
that recovery group receives request directed from user towards failed
server and **cluster** server is operated to serve user or run software
associated with failed server.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for
server failure recovery method.

USE - Server failure recovery system in multi-computer environment
to provide **back up server**.

ADVANTAGE - Enables to assume the functions of a failed server
quickly. Reduces cost by installing **cluster** software on only one
server, regardless of the size of computer network. Enables coupling of
heartbeat mechanism with all servers on a computer network. Enables
cluster server to perform useful work and to serve clients
efficiently.

DESCRIPTION OF DRAWING(S) - The figure shows a flowchart explaining
the failure recovery process.

pp; 9 DwgNo 2/3

Title Terms: FAIL; RECOVER; SYSTEM; COMPUTER; NETWORK; **CLUSTER** ; SERVE;
RUN; **CLUSTER** ; SOFTWARE; RECOVER; GROUP; RECEIVE; REQUEST; DIRECT; USER;
FAIL; SERVE; SO; **CLUSTER** ; SERVE; OPERATE; SERVE; USER

Derwent Class: T01; T03

International Patent Class (Main): G06F-011/30

File Segment: EPI

10/5/18 (Item 18 from file: 350)
DIALOG(R) File 350:Derwent WPIX
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014603916 **Image available**

WPI Acc No: 2002-424620/200245

Related WPI Acc No: 1999-254113; 1999-589750; 2000-022445; 2000-061246;
2000-474610; 2000-497896; 2000-610595; 2000-672012; 2000-672017;
2001-006173; 2001-006459; 2001-145946; 2001-146149; 2001-158074;
2001-181008; 2001-181418; 2001-181419; 2001-210102; 2001-298778;
2001-341991; 2001-353075; 2001-366015; 2001-406712; 2001-431827;
2001-440024; 2001-449893; 2001-456726; 2001-463347; 2001-463448;
2001-482088; 2001-487953; 2001-496028; 2001-501842; 2001-501843;
2001-519990; 2001-520263; 2001-578192; 2001-578801; 2001-578849;
2001-588873; 2001-595002; 2001-606702; 2002-096440; 2002-113085;
2002-129564; 2002-138806; 2002-153911; 2002-162968; 2002-194676;
2002-253965; 2002-641673; 2003-327642; 2003-415907; 2003-455740;
2003-719788; 2004-236568

XRFX Acc No: N02-333813

**Fault-tolerant application program execution system in clustered
application server network, detects failure of one server, and loads
application program to other server**

Patent Assignee: MICRON TECHNOLOGY INC (MICR-N)

Inventor: CHRABASZCZ M

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6363497	B1	20020326	US 9746327	P	19970513	200245 B
			US 97942411	A	19971001	

Priority Applications (No Type Date): US 9746327 P 19970513; US 97942411 A
19971001

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 6363497	B1	41	G06F-011/00	Provisional application US 9746327

Abstract (Basic): US 6363497 B1

NOVELTY - A server network has a pair of servers (102,104) storing
respective databases (110,112). A failure detection module detects
failure of one server and accordingly loads the application program to
the other server, based on the **backup server** information stored in
the database.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the
following:

- (a) Fault-tolerant application program execution method;
- (b) Network server system

USE - For fault-tolerant execution of application program in
clustered application server network.

ADVANTAGE - The system allows the application programs to be loaded
in another server within the network without creating conflicts in
which two copies of application programs are running on two separate
servers.

DESCRIPTION OF DRAWING(S) - The figure shows a block diagram of the
server network.

Servers (102,104)
Databases (110,112)
pp; 41 DwgNo 1/9

Title Terms: FAULT; TOLERATE; APPLY; PROGRAM; EXECUTE; SYSTEM; **CLUSTER** ;
APPLY; SERVE; NETWORK; DETECT; FAIL; ONE; SERVE; LOAD; APPLY; PROGRAM;
SERVE

Derwent Class: T01

International Patent Class (Main): G06F-011/00

File Segment: EPI

10/5/19 (Item 19 from file: 350)
DIALOG(R) File 350:Derwent WPIX
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014422253 **Image available**

WPI Acc No: 2002-242956/200230

WPI Acc No: N02-187876

Forming long-term relationship between end user system and server
involves using token containing identifier(s) for selected server,
date-time marker and key for access to memory area

Patent Assignee: INT BUSINESS MACHINES CORP (IBM)

Inventor: GAGE C A; HIND J R; PETERS M L

Number of Countries: 002 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 10116640	A1	20011220	DE 1016640	A	20010404	200230 B
KR 2001098423	A	20011108	KR 200115608	A	20010326	200230
KR 404294	B	20031103	KR 200115608	A	20010326	200418

Priority Applications (No Type Date): US 2000557708 A 20000425

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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DE 10116640	A1		15	G06F-015/173	
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KR 2001098423	A			G06F-017/00	
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KR 404294	B			G06F-017/00	Previous Publ. patent KR 2001098423
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Abstract (Basic): DE 10116640 A1

NOVELTY - The method involves receiving an information request from an end user system at a dispatcher, determining which server to select to fulfill the request, generating a token with at least one selected server identifier, a date-time marker and a key for access to a memory area for information relating to the on-going relationship to the end user device, inserting the token into the URL and sending a response with the token to the client system.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following: a method of distributing a request by an end user system to a defined server from a number of **redundant servers**, a method of sending information to a requesting end user, a computer program product and a network dispatcher.

USE - For forming a long-term relationship between end user system and server.

ADVANTAGE - Enables Internet users unable or unwilling to store local cookies or being located behind a NAT or transparent proxy server to set up a session with a defined server from a **cluster** of servers behind a dispatcher.

DESCRIPTION OF DRAWING(S) - The drawing shows a flow diagram for receiving information from an application (Drawing includes non-English text)

pp; 15 DwgNo 4B/6

Title Terms: FORMING; LONG; TERM; RELATED; END; USER; SYSTEM; SERVE; TOKEN;
CONTAIN; IDENTIFY; SELECT; SERVE; DATE; TIME; MARK; KEY; ACCESS; MEMORY;
AREA

Derwent Class: T01; W01

International Patent Class (Main): G06F-015/173; G06F-017/00

File Segment: EPI

10/5/20 (Item 20 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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014383502 **Image available**

WPI Acc No: 2002-204205/200226

KRPX Acc No: N02-155253

Clustered computer system used for on-line transaction processing and
decision support, blocks processing of write requests if write queue
exceeds threshold and resumes processing if write queue is cleared below
specific level

Patent Assignee: NCR CORP (NATC)

Inventor: MCDOWELL S R

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6260125	B1	20010710	US 98207935	A	19981209	200226 B

Priority Applications (No Type Date): US 98207935 A 19981209

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 6260125	B1	10	G06F-012/00	

Abstract (Basic): US 6260125 B1

NOVELTY - A write queue receives write requests directed to disk storages in primary and **secondary servers**, where the **secondary server** receives the requests with specific delay. Processing of further write requests to disk storage in primary server and write queue is blocked, if write queue is beyond a threshold. If write queue is cleared below a lower level, processing of write request is resumed.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(a) Asynchronous write requests mirroring apparatus;

(b) Asynchronous write transactions mirroring method

USE - For asynchronous disk mirroring in fault-tolerant data storage system used in client-server network e.g. LAN for on-line transaction processing and decision support in business application, internetworking, retail point-of-sale (POS) applications, electronic mail, distributed database and file transfer applications.

ADVANTAGE - Performs log-based reconstruction of mirror drive, and ability to check point source and target volumes within disk mirroring application is increased. The asynchronous updating of mirrored devices improves performance.

DESCRIPTION OF DRAWING(S) - The figure shows the schematic diagram of queuing system for performing asynchronous writes in disk mirroring application.

pp; 10 DwgNo 3/4

Title Terms: **CLUSTER**; COMPUTER; SYSTEM; LINE; TRANSACTION; PROCESS;

DECIDE; SUPPORT; BLOCK; PROCESS; WRITING; REQUEST; WRITING; QUEUE;

THRESHOLD; PROCESS; WRITING; QUEUE; CLEAR; BELOW; SPECIFIC; LEVEL

Derwent Class: T01; T03; T05

International Patent Class (Main): G06F-012/00

Field Segment: EPI

10/5/21 (Item 21 from file: 350)

FILED(R) File 350:Derwent WPIX

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014254499 **Image available**

WPI Acc No: 2002-075199/200210

Related WPI Acc No: 2002-011353; 2002-041514; 2002-066556; 2002-066557;
2002-130330

SRPX Acc No: N02-055483

Cluster configuration repository using cooperating primary and secondary repository managers to maintain consistent information at the primary and secondary nodes

Patent Assignee: SUN MICROSYSTEMS INC (SUNM)

Inventor: BARRAT F; BETHMANGALKAR R; CHITLOOR R V; HERRMANN F; KAMPE M A;

NGUYEN G

Number of Countries: 094 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200184338	A2	20011108	WO 2001US14228	A	20010502	200210 B
US 20010056461	A1	20011227	US 2000201099	P	20000502	200210
			US 2000201209	P	20000502	
			US 2001846250	A	20010502	
AU 200155795	A	20011112	AU 200155795	A	20010502	200222

Priority Applications (No Type Date): US 2000201209 P 20000502; US

20010099 P 20000502; US 2001846250 A 20010502

Patent Details:

Patent No Kind Lan Pg in IPC Filing Notes

WO 200184338 A2 E 26 G06F-015/16

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA
CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP
KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT
RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR
IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

US 20010056461 A1 G06F-015/16 Provisional application US 2000201099

AU 200155795 A G06F-015/16 Provisional application US 2000201209
Based on patent WO 200184338

Abstract (Basic): WO 200184338 A2

NOVELTY - A **cluster** includes primary and **secondary nodes** (50,60) and services are provided as primary services (56) while a backup copy is provided as secondary services (66). Repository managers (52,62) run nodes (50,60) and the remaining nodes (70) run on a repository agent (72), interfacing with manager (52) to serve its local clients, so that the clients, other than those on nodes (50,60), never interact directly with the managers (52,62) but act through the agent.

USE - Maintenance of and provision of access to **cluster** configurations in real time.

ADVANTAGE - Eliminating downtime from a single point of failure.

DESCRIPTION OF DRAWING(S) - The drawing shows a single **cluster** with n nodes

Primary and **secondary nodes** (50,60)

Primary and secondary services (56,66)

Repository managers (52,62)

Repository agent (72)

pp; 26 DwgNo 2/2

Title Terms: **CLUSTER**; CONFIGURATION; REPOSITORY; COOPERATE; PRIMARY;
SECONDARY; REPOSITORY; MAINTAIN; CONSISTENT; INFORMATION; PRIMARY;
SECONDARY; NODE

Derwent Class: T01

International Patent Class (Main): G06F-015/16

File Segment: EPI

10/5/22 (Item 22 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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014122490 **Image available**

WPI Acc No: 2001-606702/200169

Related WPI Acc No: 1999-254113; 1999-589750; 2000-022445; 2000-061246;

2000-328300; 2000-474610; 2000-497896; 2000-610595; 2000-672012;

2000-672017; 2000-678548; 2001-006173; 2001-006459; 2001-136310;

2001-145946; 2001-146149; 2001-158074; 2001-181008; 2001-181418;

2001-181419; 2001-210102; 2001-298778; 2001-341991; 2001-353075;

2001-366015; 2001-380155; 2001-406712; 2001-431827; 2001-440024;

2001-449893; 2001-456726; 2001-463347; 2001-463448; 2001-482088;

2001-487953; 2001-496028; 2001-501842; 2001-501843; 2001-519990;

2001-520263; 2001-578192; 2001-578801; 2001-578849; 2001-588873;

2001-595002; 2002-009754; 2002-096440; 2002-113085; 2002-113463;

2002-129564; 2002-138137; 2002-138806; 2002-153911; 2002-162968;

2002-194676; 2002-253965; 2002-424620; 2002-434500; 2002-641673;

2003-327642; 2003-415907; 2003-455740; 2003-719788; 2004-236568

XRPX Acc No: N01-452817

Fault tolerance or redundancy method for computer network resources e.g.
servers using a network directory database to re-map network resources
when a failure occurs

Patent Assignee: MICRON TECHNOLOGY INC (MICR-N)

Inventor: CHRABASZCZ M; FINDLAY B; PELLICER T J; WALLACH W A

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6292905	B1	20010918	US 9746327	P	19970513	200169 B

Priority Applications (No Type Date): US 9746327 P 19970513; US 97942815 A 19971002

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 6292905	B1	31	G06F-011/00	Provisional application	US 9746327

Abstract (Basic): US 6292905 B1

NOVELTY - Initially the users access a **clustered** resource though the primary server designated for that resource. When a fault is detected within the primary server, the directory database is updated to reflect the failure of the primary server and the resource re-mapped to the **secondary server**. This change over is transparent to the users and when the primary sever recovers, the resource is re-mapped to it.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for

(1) a program storage device

(2) a computer program

USE - To provide system redundancy within computer networks.

ADVANTAGE - No dedicated redundant resources or hardware is required in this system, instead the resources allocated to a failed server are handled by other servers within the network. Thus no hardware is idled as in a traditional redundant system. Fault tolerance and network reliability is maintained without the duplicate cost of standby hardware.

DESCRIPTION OF DRAWING(S) - The figure shows a hardware block diagram showing a network with server resident processes for providing fault tolerant network resource recovery.

pp; 31 DwgNo 3/8

Title Terms: FAULT; TOLERANCE; REDUNDANT; METHOD; COMPUTER; NETWORK; RESOURCE; SERVE; NETWORK; DIRECTORY; DATABASE; MAP; NETWORK; RESOURCE; FAIL; OCCUR

Derwent Class: T01

International Patent Class (Main): G06F-011/00

File Segment: EPI

10/5/23 (Item 23 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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13931833 **Image available**

WPI Acc No: 2001-416047/200144

MRPX Acc No: N02-026787

Highly available computer service provision method in cluster system, involves determining if resource group responsible for providing the computing service is in quorum state

Patent Assignee: INT BUSINESS MACHINES CORP (IBMC)

Inventor: ARENDT J W; CHAO C; MANCISIDOR R A

Number of Countries: 002 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
KR 2000011302	A	20000225	KR 9922327	A	19990615	200144 B
US 6314526	B1	20011106	US 98113674	A	19980710	200205
KR 326982	B	20020304	KR 9922327	A	19990615	200260

Priority Applications (No Type Date): US 98113674 A 19980710

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
KR 2000011302	A			G06F-015/16	
US 6314526	B1	15	H02H-003/05		
KR 326982	B		G06F-015/16	Previous Publ. patent	KR 2000011302

Abstract (Basic): US 6314526 B1

NOVELTY - A failure recovery mechanism determines if a **resource group** responsible for desired computing service, is in quorum state by determining if majority of the data processing systems in the **resource**

group are online, before executing the desired computing service. When **resource group** responsible for desired computing service is determined to be in quorum state, the desired computing service is provided.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- (a) **Cluster** system;
- (b) Data processing system;
- (c) Data processing system failure responding method;
- (d) Computer program product

USE - In **cluster** system (claimed) for providing highly available and highly scalable application service and for mission critical applications such as aircraft control, etc.

ADVANTAGE - System performance is improved as **cluster** units continue to provide services after a network partition even if the quorum has not been reached and a distributed database is efficiently maintained without incurring cost associated with full replication.

DESCRIPTION OF DRAWING(S) - The figure shows a flowchart explaining process of handling node failures within a **cluster** system.

pp; 15 DwgNo 4/4

Title Terms: HIGH; AVAILABLE; COMPUTER; SERVICE; PROVISION; METHOD;

CLUSTER ; SYSTEM; DETERMINE; RESOURCE; GROUP; RESPONSIBLE; COMPUTATION; SERVICE; STATE

Derwent Class: T01

International Patent Class (Main): G06F-015/16; H02H-003/05

File Segment: EPI

10/5/24 (Item 24 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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013696784 **Image available**

WPI Acc No: 2001-181008/200118

Related WPI Acc No: 1999-254113; 1999-589750; 2000-022445; 2000-061246;

2000-474610; 2000-497896; 2000-610595; 2000-672012; 2000-672017;

2001-006173; 2001-006459; 2001-145946; 2001-146149; 2001-158074;

2001-181418; 2001-181419; 2001-210102; 2001-298778; 2001-341991;

2001-353075; 2001-366015; 2001-406712; 2001-431827; 2001-440024;

2001-449893; 2001-456726; 2001-463347; 2001-463448; 2001-482088;

2001-487953; 2001-496028; 2001-501842; 2001-501843; 2001-519990;

2001-520263; 2001-578192; 2001-578801; 2001-578849; 2001-588873;

2001-595002; 2001-606702; 2002-096440; 2002-113085; 2002-129564;

2002-138806; 2002-153911; 2002-162968; 2002-194676; 2002-253965;

2002-424620; 2002-641673; 2003-327642; 2003-415907; 2003-455740;

2003-719788; 2004-236568

XRPX Acc No: N01-128949

Fault tolerant execution for application program in server network, by executing application program in one server on detection of failure of another server, based on object information

Patent Assignee: MICRON ELECTRONICS INC (MICR-N)

Inventor: CHRABASZCZ M

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6134673	A	20001017	US 9746327	P	19970513	200118 B
			US 97942318	A	19971001	

Priority Applications (No Type Date): US 9746327 P 19970513; US 97942318 A 19971001

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 6134673	A		35	G06F-011/34	Provisional application US 9746327

Abstract (Basic): US 6134673 A

NOVELTY - The application program is executed in a server (102) and an object representing application program is stored into a **cluster** network database (110). On detection of failure in server (102), a

determination of whether another server (104) has sufficient resources to execute application program is made. The program is executed in the server (104) in accordance with the information in the object.

DETAILED DESCRIPTION - The program is executed in the server (104) upon detection of a failure of the server (102), by reading the **back-up server** attribute in the object with the server (104). A determination is made whether the **back-up server** attribute names the server (104) as the **back-up server**. If so, the program is loaded into the server (104). The host server attribute is changed to name the server (104) as the host server of the program. When it is detected that the server (102) is once again operational, execution of the program in the server (102) is resumed.

USE - For providing fault tolerant execution of application programs in server network.

ADVANTAGE - Provides all the functionality of UPS, disc mirroring, or server mirroring without the added cost and complexity of additional hardware. Smoothly interfaces with existing network systems. **Clusters** application software programs which may be executed by servers within the network.

DESCRIPTION OF DRAWING(S) - The figure shows the block diagram of a **clustered** application server network.

Servers (102,104)

Cluster network database (110)

pp; 35 DwgNo 1/9

Title Terms: FAULT; TOLERATE; EXECUTE; APPLY; PROGRAM; SERVE; NETWORK;
EXECUTE; APPLY; PROGRAM; ONE; SERVE; DETECT; FAIL; SERVE; BASED; OBJECT;
INFORMATION

Derwent Class: T01

International Patent Class (Main): G06F-011/34

File Segment: EPI

10/5/25 (Item 25 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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013524969 **Image available**

WPI Acc No: 2001-009175/200102

XRPX Acc No: N01-006871

Apparatus for managing a clustered computer system such as a distributed data processing system and preventing confused communications and corrupted files

Patent Assignee: INT BUSINESS MACHINES CORP (IBMC); IBM CORP (IBMC)

Inventor: CHAO C; GOAL P M; MCCARTY R J

Number of Countries: 029 Number of Patents: 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 1024428	A2	20000802	EP 2000300598	A	20000127	200102	B
JP 2000222373	A	20000811	JP 200015577	A	20000125	200102	
KR 2000076513	A	20001226	KR 20003225	A	20000124	200134	
US 6438705	B1	20020820	US 99240494	A	19990129	200257	
KR 368078	B	20030115	KR 20003225	A	20000124	200339	
TW 523656	A	20030311	TW 2000101301	A	20000126	200365	

Priority Applications (No Type Date): US 99240494 A 19990129

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

EP 1024428 A2 E 22 G06F-009/50

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT

LI LT LU LV MC MK NL PT RO SE SI

JP 2000222373 A 23 G06F-015/177

KR 2000076513 A G06F-009/46

US 6438705 B1 H02H-003/05

KR 368078 B G06F-009/46 Previous Publ. patent KR 2000076513

TW 523656 A G06F-011/00

Abstract (Basic): EP 1024428 A2

NOVELTY - **Cluster** services (304) control **cluster** servers

(306,306a) to bring **resource group** on-line or off-line on a different node and are responsible for managing **cluster** node membership, heartbeat, etc. while a **cluster** manager (302) provides a graphical user interface. The nodes are managed with a **cluster** services program and the system is returned to an initial state after a fail-over event.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for a distributed data processing system and for a computer program with instructions.

USE - Managing a **clustered** computer system.

ADVANTAGE - Supporting a fail-over from one node to another chosen node.

DESCRIPTION OF DRAWING(S) - The drawing illustrates a preferred embodiment of the present invention

Cluster services (304)

Cluster servers (306,306a)

Cluster manager (302)

pp; 22 DwgNo 3/6

Title Terms: APPARATUS; MANAGE; **CLUSTER** ; COMPUTER; SYSTEM; DISTRIBUTE; DATA; PROCESS; SYSTEM; PREVENT; CONFUSE; COMMUNICATE; FILE

Derwent Class: T01

International Patent Class (Main): G06F-009/46; G06F-009/50; G06F-011/00; G06F-015/177; H02H-003/05

International Patent Class (Additional): G06F-015/16

File Segment: EPI

13/5/2 (Item 1 from File: 350)
DIALOG(R) File 350: Derwent WPIX
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013148635 **Image available**

WPI Acc No: 2000-320507/200028

XRPX Acc No: N00-240614

I/O request processing when primary server fails, and secondary server
takes over for primary server by retrying I/O request to secondary server
using parameters for I/O request stored on client

Patent Assignee: SUN MICROSYSTEMS INC (SUNM)

Inventor: MANKUDE H B

Number of Countries: 027 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 1001343	A1	20000517	EP 99203722	A	19991108	200028 B
JP 2000194678	A	20000714	JP 99323420	A	19991112	200039
US 6223231	B1	20010424	US 98190664	A	19981112	200125
EP 1001343	B1	20030514	EP 99203722	A	19991108	200333
DE 69907852	E	20030618	DE 607852	A	19991108	200348
			EP 99203722	A	19991108	

Priority Applications (No Type Date): US 98190664 A 19981112

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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EP 1001343	A1	E	12	G06F-011/14	
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Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT

LI LT LU LV MC MK NL PT RO SE SI

JP 2000194678	A		12	G06F-015/177	
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US 6223231	B1			G06F-013/14	
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EP 1001343	B1	E		G06F-011/14	
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Designated States (Regional): DE FR GB

DE 69907852	E			G06F-011/14	Based on patent EP 1001343
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Abstract (Basic): EP 1001343 A1

NOVELTY - The method involves allowing a client (102) application
to continue executing while an I/O request is being processed. If a
primary server (106) fails after the I/O request is sent to the primary
server but before an I/O request completion indicator returns from the
primary server, it requires retrying the I/O request to the secondary
server (108) using the parameters for the I/O request stored on the
client.

DETAILED DESCRIPTION - INDEPENDENT CLAIM are included for:

(a) an apparatus that allows an I/O request to proceed when a
primary server processing I/O requests fails and secondary server takes
over.

(b) a computer readable storage medium storing instructions to
perform a method that allows an I/O request to proceed when a primary
server processing I/O requests fails and secondary server takes over

USE - In operating systems for fault-tolerant distributed computing
systems.

ADVANTAGE - Supports asynchronous I/O requests that can switch to a
secondary server if a primary server for the I/O request fails.

DESCRIPTION OF DRAWING(S) - The drawing illustrates a distributed
computer system in accordance with an embodiment of the present
invention.

client (102)

primary server (106)

secondary server (108)

pp; 12 DwgNo 1/5

Title Terms: REQUEST; PROCESS; PRIMARY; SERVE; FAIL; SECONDARY; SERVE;

PRIMARY; SEWAGE; REQUEST; SECONDARY; SERVE; PARAMETER; REQUEST; STORAGE;

CLIENT

Derwent Class: T01; U21

International Patent Class (Main): G06F-011/14; G06F-013/14; G06F-015/177

International Patent Class (Additional): G06F-013/00; G06F-013/20

File Segment: EPI

File 348:EUROPEAN PATENT 978-2004/Jun W02

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File 349:PCT FULLTEXT 1979-2002/UB=20040610,UT=20040603

(c) 2004 WIPO/Univentio

Set	Items	Description
S1	43298	CLUSTER???
S2	137	(RESOURCE OR FAILOVER)()GROUP? ?
S3	118	PREFERRED()NODE? ?
S4	4400	(BACKUP OR BACK()UP OR FAILOVER OR STANDBY OR STAND()BY OR REDUNDANT OR SECONDARY)(2W)(NODE? ? OR TERMINAL? ? OR COMPUTER? ? OR PC? ? OR SERVER? ?)
S5	64626	(LOGICAL OR VIRTUAL OR NETWORK OR IP OR INTERNET()PROTOCOL? ?)(2W)ADDRESS OR SOCKET? ?
S6	2008	STAND(2W)(NODE? ? OR TERMINAL? ? OR COMPUTER? ? OR PC? ? OR SERVER? ?)
S7	169	S1(50N)(S2:S4 OR S6)
S8	17	S1(50N)(S2:S4 OR S6)(50N)S5
S9	170	S7:S8
S10	118	S9 AND IC=G06F
S11	9	PN=EP 381334 + PN=EP 709779 + PN=WO 0019337 + PN=WO 0184338 + PN=WO 0367461 + PN=WO 0394016 + PN=WO 0415513 + PN=WO 0415574 + PN=WO 200019337 + PN=WO 200184338 + PN=WO 200367461 + PN=WO 200394016 + PN=WO 200415513 + PN=WO 200415574
S12	110	S10 NOT S11
S13	97	S12 AND AC=US/PR
S14	88	S13 AND AY=(1970:2001)/PR
S15	16	S8 NOT S11

15/3,K/1 (Item 1 from file: 348)
DIALOG(R) File 348:EUROPEAN PATENTS
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01592759

Method, system and computer program for monitoring objects in an IT network
Verfahren, System und Computerprogramm zur Überwachung von Objekten in
einem IT-Netz

Procede, systeme et logiciel pour surveiller des objets dans un reseau de
technologie de l'information

PATENT ASSIGNEE:

Hewlett-Packard Company, A Delaware Corporation, (3016022), 3000 Hanover
Street, Palo Alto, California 94304-1112, (US), (Applicant designated
States: all)

INVENTOR:

Vosseler, Frank, Schillerstrasse 68, 71155 Altdorf, (DE)

LEGAL REPRESENTATIVE:

Lippich, Wolfgang, Dipl.-Phys, Dr.rer.nat. et al (76571), Patentanwalt
Samson & Partner, Widenmayerstrasse 5, 80538 Munchen, (DE)

PATENT (CC, No, Kind, Date): EP 1320217 A1 030618 (Basic)

APPLICATION (CC, No, Date): EP 2001129865 011214;

DESIGNATED STATES: DE; FR; GB

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: H04L-012/24; G06F-011/20

ABSTRACT WORD COUNT: 209

NOTE:

Figure number on first page: 2A

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200325	1488
SPEC A	(English)	200325	6916
Total word count - document A			8404
Total word count - document B			0
Total word count - documents A + B			8404

...SPECIFICATION Preferably, both agents 11a, 11b are permanently active in order to perform monitoring of the first and second nodes 4, 5 themselves, even if the **cluster** package 10 is inactive on the respective node. This provides information as to whether the respective node is able to back up the cluster package...applies also to Fig. 3; the only differences are described below.

With the active/active configuration of Fig. 3, it is avoided that the secondary **node** is normally idle and serves only for backup purposes. Rather, both nodes are normally active: a first monitored **cluster** package 10a' runs on the primary node 4', and a second monitored **cluster** package 10b' runs on the **secondary node** 5'. The primary node 4' is prepared to back up the second **cluster** package 10b' from the **secondary node** 5' in the case of a failover. Likewise, the **secondary node** 5' is prepared to back up the first **cluster** package 10a' from the primary node 4' in the case of a failover (see Carreira, pages 102-103). A policy and an overlaid rule for each **cluster** package (here a policy 13a' and a monitoring rule 22a for the first **cluster** package 10a' and a policy 13b' and a monitoring rule 22b' for the second **cluster** package 10b') are associated with each of the agents 11a' and 11b'. Thus, in the example of Fig. 3 with two **cluster** packages 10a', 10b', each agent 11a', 11b' has two policies 13a', 13b', although only one **cluster** package 10a' or 10b' runs on each of the first and second nodes 4', 5'. Each of the policies 13a', 13b' comprises, for each of...

15/3,K/2 (Item 2 from file: 348)
DIALOG(R) File 348:EUROPEAN PATENTS
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01406332

Processing of data packets within a network cluster

Der Verarbeitung von Datenpaketen in einer netzwerkgruppe
Traitement de paquets de donnees dans un group d' un reseaux
PATENT ASSIGNEE:

Stonesoft Corporation, (3066972), Italahdenkatu 22 A, 00210 Helsinki,
(FI), (Applicant designated States: all)

INVENTOR:

Halme, Matti, Vakka-Suomentie 18 as. 2, 20300 Turku, (FI)
Harjulahti, Esa, Vakikuja 2 C 11, 21110 Naantali, (FI)
Virtanen, Tommi, Yo-kyla 22 A 21, 20540 Turku, (FI)
Virtanen, Timo, Kellonsoittajankatu 17 B 46, 20500 Turku, (FI)
Syvanne, Tuomo, Siriuksenkuja 10 B 2, 01450 Vantaa, (FI)

LEGAL REPRESENTATIVE:

Akras, Tapio (81833), Kolster Oy Ab, Iso Roobertinkatu 23, 00120 Helsinki
, (FI)

PATENT (CC, No, Kind, Date): EP 1189410 A2 020320 (Basic)
EP 1189410 A3 030611

APPLICATION (CC, No, Date): EP 2001660150 010822;

PRIORITY (CC, No, Date): FI 201999 000911; FI 2010034 010109; FI 2010521
010315

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;
LU; MC; NL; PT; SE; TR

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: H04L-029/06

ABSTRACT WORD COUNT: 157

NOTE:

Figure number on first page: 2

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200212	3613
SPEC A	(English)	200212	14728
Total word count - document A			18341
Total word count - document B			0
Total word count - documents A + B			18341

...IDENTIFICATION network element monitors the connections traversing the network element and possibly modifies the data packets of the connections according to predetermined rules. Methods such as **network address translation (NAT)** and protocol conversions are methods requiring that the data packets are modified in such network elements. Also other modifications on the data packets...

...gateway or a firewall.

The above described security gateway may consist of several similar security gateway (= nodes), i.e. it may be a security gateway **cluster**. The nodes of a **cluster** serve as **backup nodes** to each other and the load handled by the **cluster** may be balanced between the nodes. The **clustered** structure increases availability and distributes the load, therefore reducing the probability of a downtime to nearly zero and increasing the throughput of the security gateway. Figure 1 illustrates a configuration where there are 3 nodes A1, A2, and A3 in security gateway **cluster** CA and 5 nodes B1, B2, B3, B4, and B5 in security gateway **cluster** CB. Nodes A1, A2, and A3 connect the internal network A to the public network 10, and nodes B1, B2, B3, B4, and B5 connect...

...this issue is not addressed any further here.

Within a cluster all nodes may have an individual IP addresses or they may have a common **IP address**. Alternatively, nodes may have both a common IP address and an individual IP address. Typically nodes share a common IP address using which the cluster...

15/3,K/3 (Item 3 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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01302867

Method and apparatus performing a fast service backup in cluster networking

Verfahren und Vorrichtung zur Durchführung eines Schnellen Dienstnachschiagens in einem Netzwerkgruppen

Procede et dispositif pour effectuer une recherche rapide de service dans un reseau en grappe

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PATENT (CC, No, Kind, Date): EP 1117222 A1 010718 (Basic)

APPLICATION (CC, No, Date): EP 2000204324 001204;

PRIORITY (CC, No, Date): US 480146 000110

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE; TR

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: H04L-029/06

ABSTRACT WORD COUNT: 159

NOTE:

Figure number on first page: 6

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200129	1112
SPEC A	(English)	200129	5343
Total word count - document A			6455
Total word count - document B			0
Total word count - documents A + B			6455

...SPECIFICATION secondary PDT server node so that the secondary PDT server node is kept in a consistent state with the PDT server node. This allows the **secondary PDT server node** to take over for the PDT server node if the PDT server node fails.

In one embodiment of the present invention, the system periodically sends...

...PDT servers are kept in a consistent state with the master PDT server.

In one embodiment of the present invention, the destination address includes an **Internet Protocol (IP) address**, an associated port number for the service and a protocol identifier (such as transmission control protocol (TCP) or user datagram protocol (UDP)).

BRIEF DESCRIPTION OF THE FIGURES

FIG. 1 illustrates a **clustered** computing system coupled to client computing systems through a network in accordance with an embodiment of the present invention.

FIG. 2 illustrates the internal structure...

15/3,K/5 (Item 5 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

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01209858

SYSTEM AND METHOD FOR DETERMINING CLUSTER MEMBERSHIP IN A HETEROGENEOUS DISTRIBUTED SYSTEM

SYSTEM UND VERFAHREN ZUR GRUPPENZUGEHORIGKEITSBESTIMMUNG IN EINEM HETEROGENEN VERTEILTEN RECHNERSYSTEM

SYSTEME ET PROCEDE PERMETTANT DE DETERMINER L'APPARTENANCE A UNE GRAPPE DANS UN SYSTEME HETEROGENE REPARTI

PATENT ASSIGNEE:

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PATENT (CC, No, Kind, Date): EP 1159681 A2 011205 (Basic)

EP 1159681 B1 031112

WO 2000054152 000914

APPLICATION (CC, No, Date): EP 2000917753 000306; WO 2000US5794 000306

PRIORITY (CC, No, Date): US 266195 990310

DESIGNATED STATES (Pub A): AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE;
IT; LI; LU; MC; NL; PT; SE; (Pub B): DE; GB; IE; NL

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: G06F-009/50

NOTE:

No A-document published by EPO

LANGUAGE (Publication,Procedural,Application): English; English; English

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Available Text	Language	Update	Word Count
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CLAIMS B	(English)	200346	2825
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CLAIMS B	(German)	200346	2731
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CLAIMS B	(French)	200346	3050
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SPEC B	(English)	200346	4617
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Total word count - document A	0
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Total word count - document B	13223
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Total word count - documents A + B	13223
------------------------------------	-------

...SPECIFICATION flexibility, availability, and compatibility to support enterprise-wide computing, including the cluster. The operating system 210 and related software preferably provides networking protocols, stacks, and **sockets**, as well as security for the cluster.

The cluster framework 220 runs on top of the operating system 210. The cluster framework includes the fault...

...packet, either to every other computer node with which it is in communication or just to its nearest neighbors, to indicate its presence in the **cluster**. **Cluster** membership and quorum and reconfiguration 224 maintains the proposed membership lists and the elected membership list and provides configuration and reconfiguration decision making. Switching and failover 226 detects problems and maintains the data and communications integrity of the **cluster** when failures in hardware or software occur. Reconfiguration upon detection of a failure typically is completed in a matter of minutes. Failover preferably includes cascaded failovers of a computer node in the **cluster** to multiple, **redundant backup computer nodes**, as well as file-lock migrations to avoid file corruption.

The application programming interfaces 230 are preferably designed to integrate commercially available and custom high availability applications into the **cluster** environment. Examples of APIs 230 contemplated include a data service API and a fault monitoring API. The data service API is configured to allow generic...

15/3,K/6 (Item 6 from file: 348)

DIALOG(R) File 348:EUROPEAN PATENTS

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01135143

METHOD AND PROGRAM FOR PROCESSING ADMINISTRATIVE REQUESTS OF A DISTRIBUTED NETWORK APPLICATION EXECUTING IN A CLUSTERED COMPUTING ENVIRONMENT

VERFAHREN UND PROGRAMM ZUM VERARBEITEN DER VERWALTUNGSANFRAGEN EINER VERTEILTEN NETZWERKANWENDUNG IN EINER GRUPPIERTEN RECHNERUMGEBUNG

PROCEDE ET PROGRAMME POUR TRAITER DES DEMANDES ADMINISTRATIVES D'UNE APPLICATION DE RESEAU REPARTI EXECUTEE DANS UN ENVIRONNEMENT A GRAPPES D'ORDINATEURS

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PATENT (CC, No, Kind, Date): EP 1099164 A1 010516 (Basic)
EP 1099164 B1 021127
WO 2000007101 000210

APPLICATION (CC, No, Date): EP 99935813 990721; WO 99US16540 990721

PRIORITY (CC, No, Date): US 127167 980729

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IT; LI; LU; MC; NL; PT; SE; (Pub B): DE; GB

INTERNATIONAL PATENT CLASS: G06F-009/46

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CLAIMS B	(English)	200248	452
CLAIMS B	(German)	200248	416
CLAIMS B	(French)	200248	500
SPEC B	(English)	200248	7963
Total word count - document A			0
Total word count - document B			9331
Total word count - documents A + B			9331

...SPECIFICATION have dependencies that control the relative order of
online and offline operations.

Typically, a Resource Group will contain one or more Physical Disk
resources, an **IP Address** resource, a Network Name resource, and one
or more additional resources representing a server application, such as
Generic Service resources, Generic Application resources, and/or custom
resource types. A **Resource Group** that has its own **IP Address**
resource and Network Name resource is known as a Virtual Server.

A Virtual Server appears to an external client running a TCP/IP
client/server type application as a distinctive server computer. In
reality, there may be several Virtual Servers running on a single node of
an MSCS **cluster**, each with different IP addresses. Furthermore, the
Virtual Server can move from one node of the MSCS **cluster** to the other,
and this is transparent to the client (except for a momentary
interruption or slow down in service).

Figure 1 illustrates an exemplary **cluster** comprising two nodes 10, 12
each running a respective virtual server 14, 16. A Cluster Service 18
running on each node controls the cluster, including...each Server Group
configured for this Logical Machine in the GROUPS section of the Tuxedo
configuration. The Resource Group for each logical machine has an **IP
Address** on the local area network (not shown), and a Network Name that
matches the machine name used in the MACHINES section of the Tuxedo
configuration and the NLSADDR and NADDR values specified for the in the
NETWORK section. According with the present invention, each **Resource
Group** further comprises a Resource DLL 40 and a Pipe Server 42, which
together provide apparatus for carrying out the method of the present
invention. As described hereinafter, the Resource DLL 40 represents a
component of the Tuxedo distributed network application that provides an
interface between the **cluster** environment and other components of the
Tuxedo application on that node.

With this configuration, a Tuxedo Domain with, for example, two Logical
Machines, is configured with two MSCS Virtual Servers. During normal
operations, one Virtual Server (and therefore one Logical Machine) runs
on each of the nodes of the **cluster**. If the first node of the **cluster**
fails, MSCS starts the failed Virtual Server (and corresponding Logical
Machine) on the second node of the cluster - a failover situation. Both
Virtual Servers (and...

15/3,K/7 (Item 1 from file: 349)
DIALOG(R) File 349: PCT FULLTEXT
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01122339 **Image available**

**SYSTEM AND METHOD FOR PROVIDING JAVA BASED HIGH AVAILABILITY CLUSTERING
FRAMEWORK**

**SYSTEME ET PROCEDE POUR OBTENIR UN CADRICIEL DE REGROUPEMENT A
DISPONIBILITE ELEVEE FONDE SUR JAVA**

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Patent and Priority Information (Country, Number, Date):

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Application: WO 2003US34204 20031028 (PCT/WO US03034204)

Priority Application: US 2002422528 20021031; US 2003693137 20031024

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU
CZ DE DK DM DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG
KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PG PH
PL PT RO RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA
ZM ZW

(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PT RO SE
SI SK TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 9860

Fulltext Availability:

Detailed Description

Claims

Detailed Description

... Instance is a resource of resource type "WLSApplicationServer".

A Tuxedo application instance is a resource of resource type
"TuxedoApplicationServer". By the same analogy, a cluster computer, an
IP address, or a disk, are all also resources, each of which belongs to
5 its corresponding resource type. Different resource types usually have
different sets...

...members that can be a host for it). The resource
group is also an attribute of a resource. When a resource is removed
from one **resource group** and added to another **resource group** this
attribute will correspondingly change. The **resource group** is thus a
unit
of the failover/failback process provided by the HAFW, and is also the
scope for resource interdependency and ordering. A resource's
dependency list (an attribute) can only contain resources within the same
resource group.

[0042] Figure 3 shows a topological perspective of a system in
accordance with an embodiment of the invention. As shown in Figure
3, a **cluster** is a group of interconnected, yet otherwise **stand-alone**,
computers or "machines", in this instance each computer supporting
J2EE. The **cluster** is configured with a persistent shared store for
quorum. The core of the **clustering** functionality is built into a multi
threaded process called a **cluster server**, that can be entirely
implemented in Java. Figure 3 illustrates one embodiment of the
invention as it is used to provide a high availability framework **cluster**

A resource interface which allows the **cluster** server talk to a plurality of plugins, wherein said plugins interface with a plurality of application servers to support a high availability framework between the **cluster** server and said application servers.

24 A method for providing **resource groups** in a **cluster** comprising:
0 accessing a **cluster** server which includes a plurality of resources accessible thereupon wherein each of said resources has a resource type associated with it;
defining a plurality of **resource groups** accessible via said **cluster** server, each of which resources group includes a number of associated
5 resources; and,
using a resource interface to communicate with a plurality of plugins, which plugins in turn interface with a plurality of other application servers to support a high availability framework between the **cluster** server and said other application servers.

25 A system for high availability **clustering**, comprising:
a plurality of computers that allow a user or application to access a set of application servers or application server instances, said application servers being of various types and operating on said plurality
of computers;
a **cluster** server that operates on each of said computers and that allows access to the set of application servers on that computer;
a resource interface provided...

15/3,K/9 (Item 3 from file: 349)
DIALOG(R) File 349:PCT FULLTEXT
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01080794 **Image available**

REDUNDANCY AND LOAD BALANCING IN A TELECOMMUNICATION UNIT AND SYSTEM
REDONDANCE ET EQUILIBRAGE DES LIGNES DANS UNE UNITE ET UN SYSTEME DE TELECOMMUNICATIONS

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Helsinki, FI,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200404216 A1 20040108 (WO 0404216)

Application: WO 2003FI507 20030619 (PCT/WO FI2003000507)

Priority Application: FI 20021287 20020628

Designated States: AE AG AL AM AT (utility model) AT AU AZ BA BB BG BR BY
BZ CA CH CN CO CR CU CZ (utility model) CZ DE (utility model) DE DK
(utility model) DK DM DZ EC EE (utility model) EE ES FI (utility model)
FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU
LV MA MD MG MK MN MW MX MZ NI NO NZ OM PG PH PL PT RO RU SC SD SE SG SK
(utility model) SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW
(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PT RO SE
SI SK TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH (utility model) GH GM (utility model) GM KE (utility model) KE LS
(utility model) LS MW (utility model) MW MZ (utility model) MZ SD
(utility model) SD SL (utility model) SL SZ (utility model) SZ TZ
(utility model) TZ UG (utility model) UG ZM (utility model) ZM ZW
(utility model) ZW
(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

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Fulltext Word Count: 8621

active,
unless it happens to be in a faulty unit as well. When the corresponding
standby units become active units they start serving...

...PIDP contexts. Load allocation of the control plane cluster node does
not necessarily have to be changed if the faulty unit is a user plane
cluster node, and vice versa.

The routing address of the load allocation alternative is used as the
PIDP context address of the active virtual node of...

...load allocation alternative that is visible outside the network element.
The IP address is used to indicate the route through the physical
interface of the **cluster** node.

The traffic in the network element NE may be distributed between
35 the **cluster** nodes that comprise active virtual nodes on the basis of
a specific load allocation plan. The traffic in the network element NE
may be distributed between the **cluster** nodes that comprise **standby**
virtual nodes, whereby the **standby** virtual nodes are made active.

Implementation of the second embodiment using an internal switch
Figure 6 shows the implementation of the invention on the user
plane, when GGSN has a high-speed internal switch K or a corresponding
connection between the **cluster** nodes A, B, C, D, E, F. By means of the
internal switch K, any alterations required to recover from faults can be
hidden at the interfaces of the network element, whereby the change of
the active **cluster** node to the **standby** node and vice versa is not
visible outside the network element NE. Packets arriving at the
physical Gi interface Gif or the Gn interface Gnf of the **cluster** node
A, B, C are transmitted through the internal switch K to the active
cluster node. For the sake of clarity, Figure 6 shows one switch K, but
in reality, there may be several switches.

According to a preferred embodiment...

15/3,K/10 (Item 4 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00982945 **Image available**

METHOD AND SYSTEM FOR NODE FAILURE DETECTION

PROCEDE ET SYSTEME DE DETECTION DES DEFAILLANCE DE NOEUDS

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Patent and Priority Information (Country, Number, Date):

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Priority Application: WO 2001IB1381 20010802

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CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP

KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD

SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW

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Fulltext Availability:
Detailed Description

Detailed Description

... The index or suffix P may take anyone of the values: @1a, 2a,..., VM, 1b, 2bf,,*I,
In figure 2, each node Ni of **cluster** K is connected to a first Ethernet network via links L1-i. An Ethernet switch S1 is capable of interconnecting one node Ni with another node Nj, If desired, the Ethernet link is also **redundant** : each **node** Ni of **cluster** K is connected to a second Ethernet network via links L2-i and an Ethernet switch S2 capable of interconnecting one node Ni with...of redundant network will be explained hereinafter.

In fact, the redundancy may be implemented in various ways.

The foregoing description assumes that.

- the "vice" sub- **cluster** may be used in case of a failure of the main sub-cluster;
 - the second network for a node is used in parallel with the...for a packet may be the source, destination, protocol, identification and offset fields, e.g. according to RFC
- The source and destination fields are the **IP address** of the sending node and the IP address of the receiving node. It will be seen that a node has several IP addresses, for its...

15/3,K/11 (Item 5 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00979196 **Image available**

METHOD AND APPARATUS FOR SESSION REPLICATION AND FAILOVER PROCEDE ET DISPOSITIF DE REPLICATION ET DE REPRISE DE SESSION

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Patent and Priority Information (Country, Number, Date):

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Priority Application: US 2001305992 20010716; US 2001305969 20010716; US
2001708 20011031; US 2001709 20011031

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU
CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP
KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO
RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW

(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LU MC NL PT SE SK TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

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Fulltext Availability:
Detailed Description

Detailed Description

... different server types, such as web servers, servlet engines, or Enterprise Java bean ("ejb") engines. It may still be possible for each server in a **cluster** to be separate and specialized, such as being of different server types, but still be capable of acting as a primary and/or secondary server additional primary and **secondary servers**. Clustering is, generally, an approach to server management that allows management of a set of servers by establishing a "managing" server in that set of...
...cluster.

Clustering can substantially improve system reliability and scalability.

[0038]When clustering with a system in accordance with the present invention, each server in a **cluster** can be configured to detect a new server entering the **cluster** and designate that new server as a **secondary server** to any existing primary server. The method used for load balancing may can immediately designate the new server as a primary or **secondary server**.

0 [0039] Systems in accordance with the present invention may alternatively utilize a hardware load balancer to direct incoming requests. In an Internet setting, for example, a hardware load balancer can sit on the network with an IP (Internet Protocol) **address**. Incoming requests from browsers or clients can be directed to that IP address. The hardware load balancer can then redirect those requests to other IP addresses, or other servers each assigned an IP **address**, located in the system but "behind" the hardware load balancer. In this way, it appears to the browser as if the request is always going to the same IP **address**, when in fact it may be going to multiple servers behind that IP address. The hardware load balancer can be aware of all servers located...

15/3,K/16 (Item 10 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00501875 **Image available**

CROSS-PLATFORM SERVER CLUSTERING USING A NETWORK FLOW SWITCH
GROUPEMENT TRANSVERSAL DE SERVEURS A L'AIDE D'UN COMMUTATEUR DE FLUX DE RESEAU

Patent Applicant/Assignee:

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Inventor(s):

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Patent and Priority Information (Country, Number, Date):

Patent: WO 9933227 A1 19990701

Application: WO 98US25688 19981204 (PCT/WO US9825688)

Priority Application: US 97994709 19971219

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Publication Language: English

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Fulltext Availability:

Detailed Description

Detailed Description

... IP addresses).

For purposes of outbound load balancing, unlike for inbound load balancing, network routers are configured with unique IP addresses, rather than a single IP address .

In some embodiments, the network flow switch can be configured to perform only "availability clustering ." In availability clustering , one server is serves as the primary IP server, while all other IP servers in the cluster act as secondary IP servers - at any given time (secondary operational or secondary - failed). Traffic is always routed to the primary IP server. If the primary IP server fails, the...